

Remarks/Arguments

Reconsideration of this application is requested.

RCE and Extension of Time

In response to the final Office Action mailed on June 6, 2006, requests for continued examination and a three month extension of time are enclosed. The extended period for response expires on December 6, 2006.

Claim Status

Claims 1-22 were presented. Claims 6-8 and 14-22 are withdrawn from consideration. New claims 23-26 are added. Thus, claims 1-26 are now pending.

Claim Rejections

Claims 1-5, 9, 10 and 12 are rejected under 35 USC 103(a) as obvious over Yamamoto (US 6,078,70) in view of Lange ("High Gain Short Length Phosphate Glass Erbium-Doped Fiber Amplifier Material"). Claim 11 is rejected as obvious over Yamamoto in view of Lange and Han (US 2004/0076813). Claim 13 is rejected as obvious over Yamamoto in view of Lange and Harchanko (US 2005/0147925). In response, applicant respectfully traverses the rejections.

As conceded by the Action, Yamamoto does not teach a phosphate glass waveguide layer doped with an amplifying material. However, the Action notes that Lange teaches use of Er and Yb to dope a phosphate glass waveguide, and asserts in paragraphs 2 and 14 that it would therefore be obvious to modify Yamamoto with the teachings of Lange in order to "achieve large gain in compact devices".

Applicant respectfully submits that the quoted portion of the Action reflects the Examiner's fundamental misunderstanding of Yamamoto. Yamamoto is not concerned with signal amplification. Instead, Yamamoto is concerned only with signal propagation. For example, nowhere in Yamamoto is there disclosure of a signal pump source, which is necessary for signal amplification. In the absence of a signal pump source, Er and Yb doping will degrade transmission performance. Thus, without any disclosure or suggestion of signal amplification or a signal pump

source, there is no desirability or motivation of combining Yamamoto with a reference such as Lange, which discloses Er and Yb doping, since such doping will lead to a degradation in Yamamoto's transmission performance.

For these reasons, applicant respectfully requests that the Examiner reconsider his position. There is no motivation to combine Yamamoto and Lange, and the rejections of claims 1-5 and 9-13 as obvious over Yamamoto and Lange should therefore be withdrawn.

New Claims

New claims 23-26 depend from claim 1 and are directed to additional, novel features of the present invention that are not shown or suggested by Yamamoto, Lange or any other references of record.

Claim 23 recites a signal pump source for propagating signals. For example, FIG. 2A inherently requires a signal pump source such that an optical signal 202 is propagated through the buried channel waveguide 206. As discussed above, Yamamoto does not disclose this feature.

Claim 24 is directed to a cladding layer doped with an amplifying material (see specification, paragraph [0023]). Yamamoto, by contrast, merely recites that a "gap layer 116 acts as an upper cladding layer for the waveguide layer 114 and also as a passivation layer for protecting the electrode interconnection 115." (see Yamamoto, col. 4, lines 13-18).

Claim 25 is directed to paragraph [0024] and FIG. 2A of applicant's specification, wherein the "integrated light signal tap 200 is implemented in a region of the buffer layer 106." In contrast, FIG. 1 of Yamamoto discloses coupling section 8 provided above a passivation layer 5 and to the right of the dielectric layer 6 such that "neither the dielectric layer 6 nor the waveguide layer 7 is provided on the side of the coupling section 8." (see Yamamoto, col. 15, lines 17-19). There is no disclosure or suggestion in Yamamoto that a coupling section 8 is provided *within* a dielectric layer 6.

Claim 26 recites a light signal tap directing the coupling signal *through the buffer layer* (see specification, FIG. 2A). In contrast, the signal traveling to opto-electric converting section 3 of Yamamoto receives the signal from coupling section 8 propagated from waveguide layer 7 and is not redirected through dielectric layer 6.

Conclusion

This application is now believed to be in condition for allowance. The Examiner is invited to telephone the undersigned to resolve any issues that remain after entry of this amendment. Any fees due with this response may be charged to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

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By: 

Troy M. Schmelzer
Registration No. 36,667
Attorney for Applicant(s)

1999 Avenue of the Stars, Suite 1400
Los Angeles, CA 90067
Telephone: (310) 785-4600
Fax: (310) 785-4601